

AU 2021 Sample Proposals

Sample Proposal 1

How Sustainability and Fusion 360 Can Help You Save Money and the Planet

Description:

With increasing pressure from consumers and regulations, manufacturers need to figure out how to produce more efficient products with reduced negative impact on the environment. Beyond reducing their pollution levels, organizations embracing sustainability save costs and are more competitive and innovative. In this class, we'll discuss the impact and opportunities of the major trends in sustainability for designers and manufacturers. Find out how you can use Fusion 360 software to drive efficiencies and innovation in your processes that will benefit your bottom line and the planet.

Format: Industry Talk**Learning Objectives:**

1. Define key sustainability trends, material and energy efficiency, circular economy, and governmental regulations.
2. Apply generative design for lightweighting, part consolidation, and sustainable material selection.
3. Implement nesting and AM support structure optimization for waste minimization.
4. Identify CAM workflows for machine energy efficiency.

Summary:

Discover the techniques needed to reduce costs while making more sustainable products with less impact and better material and energy efficiency using Fusion 360.

Topics:

Additive Manufacturing, Automotive and Industrial Design, Digital Transformation, Generative Design, Sustainability

Keywords:

Automotive OEM, Energy Analysis, Circular Economy, Design for Manufacturing and Assembly (DfMA), Design Thinking, Digital Prototyping, Lean Manufacturing, Part Modeling, Sustainable Design

Define your audience: Managers**Audience occupation:** BIM Manager, Business Owner/Entrepreneur, Environmental

Engineer/Designer, Executive/Senior Manager, Innovation Manager, Sustainability Consultant

Focus: Thought leadership and innovation**Level:** Associate**Prerequisites:**

Attendees should have a general understanding of their company's sustainability goals and economic pressures.

Product(s): Fusion 360, Inventor, Netfabb, Moldflow Adviser
Industry segment: Industrial Machinery

Sample Proposal 2

Design Automation for Structural Engineers

Description:

In the structural engineering industry, one of the challenges is reducing manual and tedious design tasks. Computational design tools such as Dynamo software give structural designers, engineers, and detailers the possibility to automate the creation of their deliverables to build structures with minimal energy. By doing so, they spend less time on the repetitive tasks and more energy on the important parts of the design. In this class, you'll learn how Dynamo can support design automation and computational modeling workflows for structural analysis and design of concrete and steel structures. We'll also discuss the appropriate Dynamo packages used to perform automation in your own daily workflows, saving you time and money.

Format: Instructional Demo

Learning Objectives

1. Apply automation techniques to your designs and daily workflows to save time and effort.
2. Identify the structural design automation packages in Dynamo.
3. Automate the placement of steel connections and rebar detailing in Revit.
4. Create automation scripts for analytical models.

Summary:

Learn how Dynamo supports design automation and computational modeling workflows for structural analysis and design of concrete and steel structures.

Topics:

Analysis, Automation, Building Information Modeling (BIM), Computational Design, Structural Engineering and Design

Keywords:

Architectural Design, Building Services, Design Thinking, Engineering Services, Rendering, Structural Analysis, Structural Fabrication, Structural Simulation, Steel Detailing

Define your audience: Product User

Audience occupation: Concrete Detailer, Facility Manager, MEP Engineer, Structural Detailer, Structural Engineer, Structural Steel Detailer

Focus: Exploring industry practice and workflows

Level: Professional

Prerequisites:

Basic knowledge and hands-on experience with Dynamo and Revit, and an understanding of computational modeling workflows for structural analysis and design of concrete and steel structures.

Product(s): Dynamo Studio, Revit, Robot Structural Analysis Professional

Industry segment: Building Engineering